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ABSTRACT

The purpose of this paper was to assess the relative contribution of family background and school contextual factors to the explanation of variance in self-concept among high school students and to evaluate the effect of self-concept on subsequent student achievement performance. Data for the project was gathered from a three-year study of the determinants of achievement for majority and minority students in segregated and desegregated school settings. Operationalizations used in the study included: (1) family socialization practices, (2) family authority structure, (3) family educational orientation, (4) socioeconomic position, (5) school contextual factors, (6) achievement and I.Q., and (7) self-concept. The conclusions reached from the study were: (1) Self-concept is a significant determinant of student achievement performance, (2) Controls for self-concept reduce the relationship between student achievement performance and each of the independent variables, (3) Family socialization practices exercise a larger effect on self-concept than any other variable. These results suggest that the family must be brought into the everyday interactional exchanges occuring in the schools in order for such progras to be successful. (Author/PC)

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# SELF-CONCEPT: THE LINKAGE BETWEEN FAMILY BACKGROUND, SCHOOL CONTEXT AND EDUCATIONAL SUCCESS

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RESEARCH PROBLEM

The importance of a person's self-concept for subsequent educational and occupational success is well established in the literature. In the Office of Education's Equality of Educational Opportunity Survey, self-concept is utilized as the conceptual linkage to explain the effects of family background and school compositional factors on student achievement performance. Coleman, et. al.(1966:319) reports that "sense of control of environment"[1] had the strongest relation to achievement of all the variables measured in the survey and this includes all family background and all school context variables. Rehberg (1970) and others too numerous to cite have shown that family background factors such as socio-economic position, race, income and parental educational attainment are associated with achievement values, achievement motivation and self-concept and that such personality and attitudinal variables determine in part, successful behavior in an academic environment. Katz (1968) and Pettigrew (1971) also use self-concept to account for the positive association between school contextual factors and

1. Control of Environment is the name given to an index formed by the respondent's answers to the following items:
   a. Good luck is more important than hard work for success.
   b. Everytime I try to get ahead, something or somebody stops me.
   c. People like me don't have much chance of being successful in life.

Some of these items are identified as important dimensions of an individuals self-concept by Rosen (1956, 1959), Kahl (1965) and Rehberg (1967, 1970), and are so identified in this study. The Coleman Report does have the term "self-concept"; unfortunately however, it operationalizes this in a highly restrictive manner focusing only on educational self-concept with items such as:

I would do better in school work if teachers didn't go so fast.

student academic performance. School settings of integrated, middle class schools are seen as promoting achievement performance, since they provide new comparison levels for student self-evaluation; comparison levels which offer a greater stimulus for achievement performance regardless of family background.

Both family background and school contextual factors are interpreted as operating in an interactionist perspective in which the responses of significant others are of crucial importance in shaping and modifying student self-concept and subsequent educational performance. The question of whether the family or the school is more important for the development of self-concept and subsequent achievement performance is complex and has not been researched adequately. The Office of Education"s EEOS Report has been criticized in that the mode of analysis used to assess the importance of school factors eliminates that variance shared with home factors. The Office of Education's analysis was unable to disentangle the fairly large joint effect from home and school, to consider which group of factors has greater importance. The question is whether self-concept is the linkage and if so, whether family factors or school factors contribute most to the development and modification of self-concept. The purpose of this paper is to assess the relative contribution of family background and school contextual factors to the explanation of variance in self-concept among high school students, and to evaluate the effect of self-concept upon subsequent student achievement performance.

METHODS

Data for this paper were gathered from a three year (1971-1973) longitudinal study of the determinants of achievement for majority and

minority students in segregated and desegregated school settings in Waco, Texas. The sample consists of 720 male and female 7th to 12th grade public school students. Family background variables include race, socio-economic position, authority structure, socialization practices and educational orientation. School contextual factors include the racial-ethnic composition and the socio-economic composition of the student body. Operationalizations follow. Correlation and regression analyses are used, with dummy variable techniques used for dichotomous and other non-interval scale variables. Regression analysis minimizes the potentially spurious effects in studies which combine individual and contextual factors and allows the researcher to weigh the relative contribution of variables with all other independent factors controlled.

Important Operationalizations follow.

Family Socialization Practices

Rosen (1959) analyzes socialization practices associated with achievement into two components; achievement training and independence training. Early independence training is associated with greater mother-child value similarity. McClelland (1962) who at an earlier date had suggested high achievers came from families with an early stress on self-reliance and self-mastery, now suggests that it is socialization for achievement, ie., the concern of parents for their children to do things well, that is primarily associated with achievement motivation. Douvan and Adelson (1966) report upwardly mobile children (high achievers) have higher scores on measures of independence, self-mastery and achievement socialization.

Family Socialization Practices were operationalized by an index combining respondent's scores for four factors: the frequency of parental praise;

parental stress on having pride in ones work and activities; parental stress on "doing better than others"; and parental stress on independence. Index scores ranged from 1, socialization practices not conducive to achievement to 9, socialization practices highly conducive to achievement.

Family Authority Structure

Elder (1963) summarizes previous research on parental authority patterns with the suggestion that the most fruitful approach should concentrate on the type of role relationship between the parent and the child in the child rearing process. Elder suggests a "democratic" type of authority pattern, which allows for greater interdependence between parents and children with respect to family decision-making, is conducive to high achievement. Rehberg (1965) and Douvan and Adelson (1966) report that a democratic parent-child authority pattern is more congruent with the type of child rearing process which facilitates an easy internalization of parental values through the use of indirect controls,i.e., psychological discipline and rewards. Elder (1963) reports higher achievement from adolescents from homes in which parents frequently explain their decisions and in which parental power is perceived as both reasonable and rational.

Family Authority Structure was operationalized by an index combining reapondent's scores for three factors: frequency of parental rational explanations; family authority structure (Elder,1962) ranges from democratic to authoritarian; and parental discipline techniques. Index scores ranged from 1 to 9, authoritarian to democratic family authority patterns.

Family Educational Orientation

Kahl (1953), Bordua (1960) and Rehberg (1965) report higher achievement expectations for students from families in which parents value education sufficiently

to encourage their children to continue their education beyond the high school level. Conceptually, family educational orientation refers to the amount of encouragement parents give their children to do well at school. Operationally, it is defined by an index combining respondent's scores for two items: frequency of parental encouragement; and whether it is taken for granted that the respondent will continue his education beyond the high school level.

Socio-Economic Position

Family socio-economic position was measured with the Hollingshead Two Factor Index of Social Position (1957) which combines educational and occupational scores for the father or head of the household.

School Contextual Factors

School racial-ethnic and school socio-economic context is defined as the contextual or institutional effect of the school on the individual's attitudes and behavior. The socio-economic context is composed of measures derived from the socio-economic position of parents of the students in a particular school. The racial-ethnic context is measured by the racial-ethnic composition of the school, with segregated contexts identified as those in which the student body and classes have 20% or higher than expected of any racial or ethnic group (20% higher than would be expected from the municipal composition). Desegregated contexts are those in which the student body and classes have a racial-ethnic balance in proportion to municipal composition.

Achievement and I.Q.

Measured intelligence consists of total I.Q. scores from the California Test of Mental Maturity. Achievement is measured by standardized scores for total

verbal ability from the California Achievement Test.

Self-Concept

Self-concept is defined as a set of beliefs and attitudes an individual has internalized concerning himself and his relationship to his physical and social environment. Self-concept is operationalized by an index which combines a respondent's scores for three components: personal worth; self-esteem; and the sense of control of environment factors used in the Office of Education Survey(1966).

FINDINGS

Means and rates for all variables by racial-ethnic group membership are presented in Table 1, with an intercorrelation matrix for all variables in Table 2.

TABLES 1 and 2

As expected, significant differences between racial and ethnic groups appear with respect to several of the variables. The first question this analysis must consider is whether self-concept is a significant determinant of student achievement. Table 3 presents the results of a regression run with achievement test scores as the dependent variable.

TABLE 3

For the total sample, school socio-economic context and individual I.Q. exert the largest effect on achievement performance. Self-concept is third in the amount of variance explained among achievement test scores. While the strength

of the relationship between self-concept and achievement is not as all inclusive as theorized in the Coleman Report (See for example, Dyer, 1972:p.396), it does significantly contribute to the explanation of variance in student achievement scores. Those students with positive and confident self-concepts have the higher achievement scores. These findings are congruent with Kagan's (1965) and Rehberg's (1970) conjecture concerning the effects of student motivation and self-attitude for the acquisition of intellectual skills and knowledge. Separate regressions for the different racial and ethnic groups indicates the strength of factors varies. While part of this difference may be due to the differing magnitudes of $R^2$, the relative order of factors is of primary importance for this study. On the basis of the data presented in Table 3, self-concept is concluded to be a significant determinant of student achievement performance.

The second question around which this study is organized is to determine whether self-concept is the linkage or at least a primary linkage between family background, school contextual factors and student achievement performance. Table 4 presents the original and second order partial correlation coefficients for all of the variables with the dependent variable of achievement test scores. The partial correlation coefficient is obtained by controlling the variable of self-concept.

TABLE 4

All of the partial coefficients are smaller in magnitude than the original zero order coefficients indicating that self-concept does intervene between each of these factors and the dependent variable of student achievement perfor-

mance. While the size of the reduction is not large in some cases, there is evidence that self-concept links family background factors and school contextual factors to variance in student achievement. Self-concept is concluded, therefore, to be a primary linkage between the forces exerted by family background and school contextual variables; and the effect of these forces for student achievement performance.

The final question to be addressed in this paper is to determine whether family background variables or school compositional variables exercise the greatest effect on student self-concept. Table 5 presents the results of a regression with self-concept as the dependent variable.

TABLE 5

Family Socialization Practices explain the largest proportion of variance in self-concept, followed by the school's socio-economic composition. Each of the other variables are associated with self-concept when all other factors are simultaneously controlled. Regardless of racial, ethnic or socio-economic background, students with positive self-concepts ( self-concepts conducive to high achievement performance) come from families in which socialization techniques are democratic, stressing independence and mastery and utilizing psychological forms of discipline. Students from this type of family, attending middle class schools manifest high levels of achievement performance. Students with negative self-concepts ( self-concepts not conducive to high achievement performance) come from families in which socialization techniques are authoritarian, stressing dependence and fatalism and utilizing physical forms of discipline. Students from this type of family attending lower class schools

manifest poor achievement performance. The strength of factors varies among the various racial and ethnic groups and an interaction is noted between race and the racial-ethnic composition of the school.

SUMMARY AND CONCLUSIONS

An analysis of longitudinal data has provided answers to a series of questions regarding the relationship between family background factors, school contextual factors and student achievement performance. Self-concept was investigated as a possible link between the above factors. In summary, the conclusions of this paper are:

1. Self-concept is a significant determinant of student achievement performance, regardless of the students I.Q., race, family socio-economic position, indeed, regardless of any of the other independent factors considered in this paper.
2. Controls for self-concept reduce the relationship between student achievement performance and each of the independent variables considered in this paper, indicating that self-concept occupies the position of an intervening variable, the linkage between the independent and dependent factors considered in this paper.
3. Family Socialization Practices exercise a larger effect on self-concept than any other variable. This relationship is true even when the effects of all of the other family and school variables are controlled. By summing the squares of the regression coefficients from Table 5, the family is concluded as exercising a much larger effect on self-concept than school context. Family factors account for 59% of the explained variance in self-concept; with school factors accounting for 31%; Individual, 8%.

The conclusions presented here, hold for all races and all socio-economic groups. Thus it would appear that self-concept is not only the linkage it has been theorized to be, but that the family exercises the greatest effect on the development and maintainence of the self-concept. The implication of this paper is important for those who might wish to utilize the "schools" to bring about equal academic performance among students from differing racial, ethnic and family cultural backgrounds. Unless the family is brought into the everyday interactional exchanges occuring within the schools, such programs are doomed to only limited small success. If the family can be brought into the school "program" in a meaningful, relevant way, with decision-making power, then the results of such a joint school-home endeavor might work. Of course this would mean substantial changes in the ways schools are structured and operated.

TABLE 1

VARIABLES: MEANS AND RATES BY RACIAL/ETHNIC CATEGORIES

| Variable Name | | Total | Mexican American | Black | Anglo |
|---|---|---|---|---|---|
| $X_1$ | Self-Concept | 2.74 | 2.12 | 3.24 | 2.67 |
| $X_2$ | Racial-Ethnic Group | 100% | 10% | 21% | 69% |
| $X_3$ | Family Socio-economic Position | 29.4 | 11.4 | 23.0 | 38.1 |
| $X_4$ | Measured I.Q. | 98.3 | 84.7 | 85.0 | 104.9 |
| $X_5$ | Family Authority Structure | 2.8 | 3.2 | 2.7 | 2.8 |
| $X_6$ | Family Socialization Practices | 4.5 | 3.4 | 3.8 | 4.9 |
| $X_7$ | School Racial-Ethnic Composition | 2.2 | 1.4 | 2.0 | 2.7 |
| $X_8$ | School Socio-economic Composition | 17.1 | 8.1 | 12.8 | 22.8 |
| $X_9$ | Family Educational Orientation | 3.6 | 2.7 | 2.4 | 4.9 |
| $X_{10}$ | Composite Achievement Score | 49.0 | 30.5 | 28.1 | 58.5 |

$X_1$ Measured by an index of 1=negative to 5=positive.
$X_2$ Percent of 7th to 12th grade student racial-ethnic distribution.
$X_3$ Measured by a transformed Hollingshead ISP of 1=low to 50=high.
$X_4$ Total I.Q. score from the CTMM
$X_5$ Measured by an Index of 1=authoritarian to 5=democratic
$X_6$ Measured by an Index of 1=not conducive to achievement to 9= conducive to ach.
$X_7$ Measured by an Index of 1=desegregated, 2=partially desegregated, 3=segregated.
$X_8$ Measured by an Index of 1=low SES to 30=high SES
$X_9$ Measured by an Index of 1=low to 6=high
$X_{10}$ Standardized scores for Total Verbal Ability, California Achievement Test.

TABLE 2

INTERCORRELATION OF VARIABLES

| | $X_1$ | $X_2$ | $X_3$ | $X_4$ | $X_5$ | $X_6$ | $X_7$ | $X_8$ | $X_9$ | $X_{10}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| $X_1$ | 1.000 | | | | | | | | | |
| $X_2$ | .152 | 1.000 | | | | | | | | |
| $X_3$ | .186 | -.416 | 1.000 | | | | | | | |
| $X_4$ | .389 | -.423 | .441 | 1.000 | | | | | | |
| $X_5$ | .178 | .031 | .155 | .135 | 1.000 | | | | | |
| $X_6$ | .394 | -.054 | .152 | .442 | .317 | 1.000 | | | | |
| $X_7$ | .124 | -.299 | .473 | .454 | .031 | .189 | 1.000 | | | |
| $X_8$ | -.146 | -.409 | .519 | .526 | .024 | .273 | .742 | 1.000 | | |
| $X_9$ | .240 | -.019 | .094 | .051 | .163 | .154 | .028 | -.022 | 1.000 | |
| $X_{10}$ | .694 | .261 | .233 | .731 | .115 | .387 | .206 | .314 | .112 | 1.000 |

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$X_1$ Self-Concept

$X_2$ Racial-Ethnic Group

$X_3$ Family Socio-economic Position

$X_4$ Measured I.Q.

$X_5$ Family Authority Structure

$X_6$ Family Socialization Practices

$X_7$ School Racial-Ethnic Composition

$X_8$ School Socio-economic Composition

$X_9$ Family Educational Orientation

$X_{10}$ Standardized Achievement Score

TABLE 3

REGRESSION ANALYSIS FOR THE DEPENDENT VARIABLE OF ACHIEVEMENT SCORES BY RACIAL/ETHNIC CATEGORY

| Independent Factors | | Total | Anglo | Black | Mexican American |
|---|---|---|---|---|---|
| $X_1$ | Self-Concept | .257 | .213 | .115 | .382 |
| $X_2$ | Racial-Ethnic Group Membership | -.212 | - | - | - |
| $X_3$ | Family Socio-economic Position | .224 | .162 | .314 | .071 |
| $X_4$ | Measured I. Q. | .312 | .314 | .206 | .367 |
| $X_5$ | Family Authority Structure | .172 | .117 | .208 | .011 |
| $X_6$ | Family Socialization Practices | .238 | .253 | .186 | .109 |
| $X_7$ | School Racial-Ethnic Composition | .119 | .153 | -.234 | -.488 |
| $X_8$ | School Socio-economic Composition | .338 | .396 | .207 | .294 |
| $X_9$ | Family Educational Orientation | .110 | .115 | .113 | .094 |
| | $R^2$ | .495 | .445 | .342 | .638 |

TABLE 4

ORIGINAL AND PARTIAL CORRELATION COEFFICIENTS FOR THE RELATIONSHIP BETWEEN ALL VARIABLES AND ACHIEVEMENT SCORES WITH SELF-CONCEPT CONTROLLED

| Independent Variables | | Original | Partial |
|---|---|---|---|
| $X_2$ | Racial-Ethnic Group Membership | .261 | .218 |
| $X_3$ | Family Socio-economic Position | .233 | .147 |
| $X_4$ | Measured I. Q. | .731 | .687 |
| $X_5$ | Family Authority Structure | .115 | -.011 |
| $X_6$ | Family Socialization Practices | .387 | .172 |
| $X_7$ | School Racial-Ethnic Composition | .206 | .165 |
| $X_8$ | School Socio-economic Composition | .314 | .296 |
| $X_9$ | Family Educational Orientation | .112 | -.081 |

TABLE 5

REGRESSION ANALYSIS FOR THE DEPENDENT VARIABLE OF SELF-CONCEPT BY RACIAL/ETHNIC CATEGORY

| Independent Factors | | Total | Anglo | Black | Mexican American |
|---|---|---|---|---|---|
| $X_6$ | Family Socialization Practices | .347 | .267 | .431 | .317 |
| $X_8$ | School Socio-economic Composition | .289 | .284 | .186 | .373 |
| $X_5$ | Family Authority Structure | .176 | .053 | .209 | .196 |
| $X_4$ | Measured I. Q. | .152 | .205 | .105 | .147 |
| $X_9$ | Family Educational Orientation | .125 | .108 | .161 | .148 |
| $X_7$ | School Racial-Ethnic Composition | .124 | .131 | -.092 | -.332 |
| $X_3$ | Family Socio-economic Position | .121 | .072 | .121 | .148 |
| $X_2$ | Racial-Ethnic Group Membership | .045 | - | - | - |
| | $R^2$ | .316 | .236 | .334 | .485 |

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